

25X1

## CD NO.

DATE DISTR. 4 August 1950

NO. OF PAGES 6

NO. OF ENCLS.   
(LISTED BELOW)

25X1

**RETURN TO CIA  
LIBRARY**

DATE OF INFO. 25X1

SUPPLEMENT TO  
REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT OF U.S.C. 31 AND 32, AS AMENDED, ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

25X1

1. The Patra Mountains power station supplies electric current to Budapest and the nearby industrial district. The long-distance network of the electrical supply of Budapest is composed of the following stations:

- a. The Kelenfoeld Power Station in Budapest (120,000 kw and 60 kw old generating plant mains as emergency units)
- b. Bannhida Power Station near Tatabanya (100,000 kw)
- c. Matravidek Power Station (100,000 kw). \*

23

As the Bannhida power station must also supply the electrified railroad line Budapest-Hegyeshalom-(Vienna) and as, due to maintenance work, at least one of the generating sets is out of operation, the energy supply would evidently not be sufficient without the new power station.

- ### 3. Description of Matravidek Power Station:

This power station is remarkable from the economical viewpoint as it was built near a coal district exploited for its requirements and thus forms a co-operative unit with a coal pit. The construction work was started in 1941 and the station was to be

This document is hereby regraded to **CONFIDENTIAL** in accordance with the letter of 18 October 1978 from the Director of Central Intelligence to the Archivist of the United States.

Next Review Date: 2008

Document No. **100-441111**  
 No Change In Class.  
☒ Declassified  
 Class. Changed To: **TS**  
 Auth: **HR 782**  
 Date: **2/2/78**

25X1

**EE**

## CLASSIFICATION

~~SECRET/CONTROL~~

U.S. OFFICIALS ONLY

[illegible]

Approved For Release 2006/02/27 : CIA-RDP82-00457R005300720001-7

**CONFIDENTIAL****SECRET/CONTROL - U.S. OFFICIALS ONLY****CENTRAL INTELLIGENCE AGENCY**

-2-

25X1

put into service by the end of 1944. The engines, the long-distance line, the transformer plant and the ropeway installation had, however, to be delivered to the Soviet Union on reparations account by order of the Soviet occupation authorities. In 1947, the Hungarian Economic Council was ordered to reconstruct the plant. The power station is 60 km NE of Budapest, between the railroad line Hatvan-Salgotarjan and the river Zagyva, south of, and close to, the village of Loerinci. A ropeway line 5½ km long connects the colliery of Pernyepusztá with the power station.\*\*

4. Layout and organization of the plant (see Annex 2):

The coal is conveyed from the pit by the ropeway (1) either directly to the belt conveyor or into the coal depot (2) which has a storing capacity of 12,000 tons. A rail track also connects the coal depot with the railroad line; thus the plant can be supplied by the nearby collieries of Rozsaszentmarton and Salgotarjan by rail in case the ropeway is not working. The boiler house (3) contains six boilers, a group of two boilers serve one turbine unit; the latter are installed in the adjoining engine house (4). The engine house is built to accommodate three generating sets of 33,500 kw each and one 8,000 kw unit; \*\*\* the latter covers the work's own requirement. The foundations for an eventual enlargement of the plant by a fourth generating set are also finished. The long-distance line goes to Budapest from the switching and transformer station (5) (10,000/100,000 kw). East of the plant is the large cooling pond which covers an area of 530,000 square meters (6) and was built for a storage capacity of one million cubic meters. Additional cooling water is obtained from the Zagyva River where a barrage dam and a pumping installation were built. Twenty-two wells were sunk for cooling-water supply in case of emergency.

North of the plant are the dwelling houses for the employees and workmen of the plant (7).

**SECRET-CONTROL/US OFFICIALS ONLY****CONFIDENTIAL**

**CONFIDENTIAL**

SECRET/CONTROL - U.S. OFFICIALS ONLY

CENTRAL INTELLIGENCE AGENCY

-3-

25X1

## 5. The generating and boiler plants:

The turbo-generators, built by the Ganz-Budapest firm, run at 3,000 r.p.m. and are built for a load of 44,000 kw-amp.; they produce a three-phase current of 33,500 kw of 10,000 v and 50 periods. The steam turbines, developing a power of 50,000 hp are two-cylinder BBC-turbine working at a steam pressure of 65 atmospheres and a temperature of 500 degrees centigrade. They are fitted with outlets for preheating and the feed water and with twin condensers. The recooling is done by the pond. Each generating group is fed by two boilers of 80 kg/cm<sup>2</sup>. The boilers are of the Babcock-Wilcox type with wall firing and can burn lignite of a caloric value of 1,800 calories and 30 percent dust content. The slag is removed by a belt conveyor. The lignite coal from the pit contains 44 percent water and 20 to 22 percent ash; its caloric value ranges between 1,700 and 2,100 calories. To make this coal burnable on the grates part of the coal dust must be extracted in the colliery. It is planned to fit the new boilers with pulverized-coal-burning installations to use the coal without waste.

6. The coal Pit

The coal dug here is a type of lignite. It stretches over an area of about 3,000 hectares and is estimated at about 140 million tons. The lignite layer lies about 20 to 100 meters under the surface of earth and is about 2½ meters thick. The layer itself is interspersed with two layers of rock, 40 cm thick; the exploitable layer consequently is only 170 cm thick. The quantity exploited is 30 percent over the quantity used for combustion.

7. The scheduled output of the colliery is shown in Annex 1, sketch 2. The full hauling capacity will not be reached before late 1952 when the third set of generators is put into operation. Difficulties arise from the sedimentation of the dust of the lignite and the rock. Under full operation this waste will amount to 80 to 100 carloads per day.

SECRET-CONTROL/US OFFICIALS ONLY

**CONFIDENTIAL**

**CONFIDENTIAL**

SECRET/CONTROL - U.S. OFFICIALS ONLY

CENTRAL INTELLIGENCE AGENCY

-4-

25X1

Part of the dust has a caloric value of only 1,000 calories and therefore cannot be burnt in the boilers.

### 8. Costs and building Program

Only those costs which arose before the end of the three-year plan, are listed in the following:

228 million forints (price index of 1948) were spent on the construction of the power plant with three engine units and 34 millions of this total before the end of the three-year plan. The most important items were:

Completion of and repair to the plant:	14 millions
Ropeway for coal and slag	11 millions
Coal depot	10 millions
Cooling installation with accessories	12 millions
Two boilers	31 millions
One generating set with transformers	15 millions
Switching plant	12 millions
55 km long-distance line for 100,000 volts	27 millions

The value of the installations including the first outfit (buildings) is estimated at 70 million forints. The building costs thus amount to 3,000 forints per kw.

The overhead costs, including auxiliary material and maintenance costs, are calculated to be 0.02 forints per kw/hr. The haulage costs for the coal are estimated at 4 to 4.7 forints per 100 kg and a million calories in the boiler house cost 25 forints.

The costs of the coal pit are:

Completion of the shafts	13 millions
Belt conveyor plant	10 millions
Crushing and screening installation	9 millions
Electrical installations	2 millions
Mechanical outfit	5 millions
Works buildings	17 millions

SECRET-CONTROL/US OFFICIALS ONLY

**CONFIDENTIAL**

**CONFIDENTIAL****SECRET/CONTROL - U.S. OFFICIALS ONLY****CENTRAL INTELLIGENCE AGENCY**

-5-

25X1

The main shaft, 2,300 meters long, will be completed under the three-year plan; the further extension of the pit can only be achieved under the five-year plan.

Ninety percent of all deliveries can be produced by the national industry. The first generating unit was put into operation in the spring of 1949. The second engine unit and the third and fourth boiler will be put in service in 1950, the installation of the last group of generating sets with their boilers will be completed in 1952. Full operation of the plant can be expected in the Winter of 1952/1953.

comment:

a. The major part of Hungary's requirements of energy is supplied by heat engines plants. The capacity of the Hungarian hydroelectric plants is still unimportant. The production of electric energy was:

in 1938	1.4 billion kw-hr (kilowatt-hours)
in 1948	1.7 billion kw-hr
scheduled for 1950	2.1 billion kw-hr
scheduled for 1955	4.3 billion kw-hr

No village in Hungary will be without electricity by the close of 1955 (end of the five-year plan).

b. For generating current the new power station uses lignite from Rozsaszentmarton which has an average caloric value of 1,800 calories. Experts believe that by putting in only one generating set of the new power station, 140,000 tons per year of high-grade coal, which otherwise would have to be transported from Tatabanya, can be saved. As at the same time this amount of coal need not be shipped to Budapest the rolling stock, of which there is a shortage, is free for other important transportation tasks.

**SECRET-CONTROL-US OFFICIALS ONLY****CONFIDENTIAL**

**CONFIDENTIAL****SECRET/CONTROL - U.S. OFFICIALS ONLY****CENTRAL INTELLIGENCE AGENCY****-6-**

25X1

\* Aside from the three power stations mentioned there is a power station in Tatabanya proper which also contributes to the power supply to Budapest. The power station in Bannhida has four turbines with a capacity of 25,000 kw each; three are permanently in operation and one turbine is a reserve. As a result the actual output of this power station is only 60,000 kw. This power station supplies electric current to the railroad lines Budapest-Győr (Raab) and Budapest-Székesfehérvár. The power station of Tatabanya has an actual output of 40,000 kw. The actual output of Melenfoeld power station also is only 40,000 kw, [REDACTED]

\*\* The value of the generating plants of the power station of Matravidek (para 3) which was dismantled by the Soviets in 1944 is stated to be 8 million dollars.

\*\*\* As one of the three 33,500 kw generating sets, mentioned in para 4, may be a reserve, an actual output of about 66,000 kw is assumed. This capacity, which is replaceable under ordinary circumstances corresponds to a yearly production of about 300 million kw-hr, taking 4,500 work hours per year.

## 2 Annexes

- (1) Top load and Carloads per day
- (2) The Super Power Station in the Matra Mountains.

**SECRET-CONTROL/US OFFICIALS ONLY****CONFIDENTIAL**